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09/976,671	10/12/2001	Toshiyuki Miyabashi	U 013667-3	1087

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/976,671

Applicant(s)

MIYABASHI ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-20,22 and 25-35 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 8-20,22 and 25-35 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. All outstanding rejections of record are overcome by applicants' amendment filed 2/3/05.

Upon updating the searches, new references came to the attention of the examiner. In light of the new grounds of rejection as set forth below, the finality of the previous office action has been withdrawn and thus, the following action is non-final.

It is noted that in the amendment filed 2/3/05, the status of claims 15 and 19-20 was listed as "currently amended" however, there was no amendment to any of these claims. It appears the correct status of these claims should be "previously presented".

### **Claim Objections**

2. Claim 35 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 35, which depends on claim 34 which depends on claim 8, discloses that the solid wetting agent is selected from the group consisting of saccharide, sugar alcohol, salt of hyaluronic acid, trimethylolpropane, 1,2,6-hexanetriol, and mixtures thereof while claim 8 discloses solid wetting agent selected from the group consisting of salt of hyaluronic acid, trimethylolpropane, and 1,2,6-hexanetriol. Thus, claim 35 fails to further limit the claim on which it depends, namely, claim 8, given that claim 35 is broader than claim 8. The wetting agent of claim 8 is limited to salt of hyaluronic acid, trimethylolpropane, or 1,2,6-hexanetriol while the wetting agent of claim 35 includes not only salt of hyaluronic acid, trimethylolpropane,

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and 1,2,6-hexanetriol but also saccharide and sugar alcohol as well as mixtures of the cited wetting agents. Should claim 35 be cancelled?

**Claim Rejections - 35 USC § 112**

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15, which depends on claim 8, recites that the ink further comprises a wetting agent. The scope of the claim is confusing because it is not clear how or if this wetting agent is different from the solid wetting agent recited in claim 8. Must the ink comprise two wetting agents? Clarification is requested.

**Claim Rejections - 35 USC § 102**

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 8-20, 22, 26-31, and 33-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Ota et al. (U.S. 2002/0075369).

Ota et al. disclose ink jet ink comprising 0.5-30% pigment dispersant comprising 5-50% surface treated pigment that comprises hydrophilic groups on its surface including sulfonic group, sulfinic group, and carboxylic group, resin emulsion neutralized with inorganic hydroxide wherein the resin emulsion is present in amount of, for instance, 3% based on solids, and 0.05-50% wetting agent such as 1,2,6-hexanetriol, 0.5-10% compound that functions as both penetrating agent and wetting agent such as acetylene glycol, glycol ether such as diethylene glycol monobutyl ether, and alkylene glycols including 1,2-(C<sub>4</sub>-C<sub>10</sub> alkyl) diols, glycerin in amount, for instance, of 10%, pH adjustor, and solvent. There is also disclosed a method wherein the ink is printed using ink jet printer onto substrate (paragraphs 63, 72-76, 81, 86, 104, 108, 127, 132, 147, 154, 162, 183, 185, 186-193, 197, 199, 200, 547, 586-587, and example 6). Although there is no explicit disclosure that 1,2,6-hexanetriol is a “solid” wetting agent as presently claimed, given that Ota et al. disclose wetting agent identical to that presently claimed, it is clear that 1,2,6-hexanetriol is inherently solid at room temperature.

Although there is no explicit disclosure of the reactivity of the polymer with divalent metal salt as required in present claim 33, it is understood (see page 10, line 19-page 11, line 7 of the present specification) that the reactivity is determined by both the fine polymer particle diameter and the amount of carboxyl groups on the surface of the particle. It is noted that Ota et al. disclose polymer emulsions that naturally contain high amounts of carboxyl groups on the surface, i.e. obtained from acid component, and have a diameter of less than 300 nm (paragraphs 127 and 149). Since Ota et al. clearly meets both criteria for reactivity as disclosed above, it is

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expected that the reference fine polymer particle will intrinsically exhibit reactivity similar to that claimed.

Although the resin emulsion is produced by process different than that presently claimed, it is noted that “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself”. See MPEP 2113.

Thus, although Ota et al. do not disclose polymer emulsion being produced by process as presently claimed, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product” *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process and given that Ota et al. meet the requirements of the claimed resin emulsion, i.e. polymer emulsion neutralized with inorganic hydroxide, Ota et al. clearly meet the requirements of the present claims.

In light of the above, it is clear that Ota et al. anticipate the present claims.

**Claim Rejections - 35 USC § 103**

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 8-9, 15-17, 19-20, 22-31, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al. (U.S. 2002/0065347) in view of Kubota et al. (U.S. 6,039,796), Ohta et al. (U.S. 5,954,866), and *Aldrich Catalog*.

Freeman et al. disclose ink jet ink comprising water, solvent, 3-8% pigment including self-dispersible pigment, 1-30% humectant such as glycerol, penetrant such as 1,2-hexanediol, and 0.1-10% film-forming binder which is a polymer emulsion produced by process which comprises the steps of mixing water, monomer, emulsifier, and initiator together to allow emulsion polymerization to proceed to form polymer emulsion followed by adjusting the pH to alkaline, for instance, 8.5, using potassium hydroxide. There is also disclosed a method wherein the ink is printed using ink jet printer onto substrate (paragraphs 16-17, 19-21, 26, 28-30, 32-33, and 61-62).

Although there is no explicit disclosure of the reactivity of the polymer with divalent metal salt as required in present claim 33, it is understood (see page 10, line 19-page 11, line 7 of the present specification) that the reactivity is determined by both the fine polymer particle diameter and the amount of carboxyl groups on the surface of the particle. It is noted that Freeman et al. disclose polymer emulsions that naturally contain high amounts of carboxyl groups on the surface, i.e. obtained from acid component, and have a diameter of 250-400 nm.

Since Freeman et al. clearly meets both criteria for reactivity as disclosed above, it is expected that the reference fine polymer particle will intrinsically exhibit reactivity similar to that claimed.

The difference between Freeman et al. and the present claimed invention is the requirement in the claims of (a) solid wetting agent and (b) pH adjustor.

With respect to difference (a), Kubota et al., which is drawn to ink jet ink, disclose the use of wetting agent such as 1,2,6-hexanetriol and trimethylolpropane (col.5, lines 43-47 and 51-52). Given that Kubota et al. disclose wetting agent identical to that presently claimed, it is clear that such wetting agents would intrinsically be solid at room temperature. Evidence to support this position is found on page 2387 of the *Aldrich Catalog* that discloses that trimethylolpropane has melting temperature of 56 to 58 °C and thus, it would have been natural for one of ordinary skill in the art to infer that trimethylolpropane is in fact solid at room temperature.

In light of the motivation for using wetting agent such as 1,2,6-hexanetriol or trimethylolpropane disclosed by Kubota et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such wetting agent in the ink jet ink of Freeman et al. in order to produce ink with increased wettability that will not clog the printer nozzles, and thereby arrive at the claimed invention.

With respect to difference (b), Ohta et al., which is drawn to ink jet ink, disclose the use of pH adjustor such as sodium hydroxide, lithium hydroxide, or potassium hydroxide in order to improve the dispersion stability of the pigment and resin emulsion (col.9, lines 26-31).

In light of the motivation for using pH adjustor disclosed by Ohta et al. as describe above, it therefore would have been obvious to one of ordinary skill in the art to use such pH adjustor in



the ink jet ink of Freeman et al. in order to produce ink with good stability, and thereby arrive at the claimed invention.

9. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al. in view of Kubota et al., Ohta et al., and *Aldrich Catalog* as applied to claims 8-9, 15-17, 19-20, 22-31, and 33-35 above, and further in view of either Belmont et al. (U.S. 5,630,868) or Suzuki et al. (U.S. 6,153,001).

The difference between Freeman et al. in view of Kubota et al., Ohta et al., and *Aldrich Catalog* and the present claimed invention is the requirement in the claims of specific type of pigment.

Belmont et al. disclose the use of modified carbon black containing hydrophilic group on its surface wherein the hydrophilic group includes sulfonic acid, sulfinic acid, carboxylic acid and their salts. The motivation for using such pigment is that it has improved water dispersability as compared to untreated carbon black and produces ink with good stability, jettability, print quality, and optical density (col.4, lines 15-21, 29-35, and 44-46, col.5, lines 46-47, col.5, line 63-col.6, line 6, and col.6, lines 41-56).

Alternatively, Suzuki et al. disclose self-dispersing pigment containing hydrophilic group on its surface wherein the hydrophilic group includes sulfonic acid and carboxylic acid and their salts. The motivation for using such pigment is that no dispersant is required to stably disperse the pigment in the ink (col.7, lines 5-62).

In light of the motivation for using specific type of pigment disclosed by either Belmont et al. or Suzuki et al., it therefore would have been obvious to one of ordinary skill in the art to

use such pigment in the ink of Freeman et al. in order to produce ink which has good stability, jettability, print quality, and optical density, or alternatively, to produce ink which does not require dispersant, and thereby arrive at the claimed invention.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman et al. in view of Kubota et al., Ohta et al., and *Aldrich Catalog* as applied to claims 8-9, 15-17, 19-20, 22-31, and 33-35 above, and further in view of Kubota et al. (U.S. 6,039,796).

The difference between Freeman et al. in view of Kubota et al., Ohta et al., and *Aldrich Catalog* and the present claimed invention is the requirement in the claim of specific type of penetrant.

Kubota et al., which is drawn to ink jet ink, disclose the use of glycol ether penetrant (col.5, line 66-col.6, line 7) in order to increase penetration of ink into substrate.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use glycol ether penetrant in the ink jet ink of Freeman et al., and thereby arrive at the claimed invention.

11. Claims 8-9, 15, 19-20, and 22-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganapathiappan et al. (U.S. 2003/0060562) in view of Kubota et al. (U.S. 6,039,796), Ohta et al. (U.S. 5,954,866), and *Aldrich Catalog*.

Ganapathiappan discloses ink jet ink comprising water, solvent in amount of, for instance, 10%, 0.1-15% pigment, penetrant, wetting agent, and 1-5% polymer emulsion comprising fine particles of polymer wherein the polymer emulsion is produced by process

which comprises the steps of mixing water, monomer, emulsifier, and initiator together to allow emulsion polymerization to proceed to form polymer emulsion followed by adjusting the pH greater than 7 using potassium hydroxide. It is disclosed that the polymer is produced from monomers including 0.1-5% crosslinking monomer and 1-60% hydrophilic monomers comprising acidic functional groups. There is also disclosed a method wherein the ink is printed using ink jet printer onto substrate (paragraphs 10, 14, 23-24, 33, 62-63, 65, 78, 81, 87, and 89).

Although there is no explicit disclosure of the reactivity of the polymer with divalent metal salt as required in present claim 33, it is understood (see page 10, line 19-page 11, line 7 of the present specification) that the reactivity is determined by both the fine polymer particle diameter and the amount of carboxyl groups on the surface of the particle. It is noted that Ganapathiappan discloses polymer emulsions that naturally contain high amounts of carboxyl groups on the surface, i.e. obtained from hydrophilic monomers comprising acidic functional groups, and have average diameter of 5-500 nm. Since Ganapathiappan clearly meets both criteria for reactivity as disclosed above, it is expected that the reference fine polymer particle will intrinsically exhibit reactivity similar to that claimed.

The difference between Ganapathiappan and the present claimed invention is the requirement in the claims of (a) solid wetting agent, (b) pH adjustor, and (c) specific type of wetting agent.

With respect to difference (a), Kubota et al., which is drawn to ink jet ink, disclose the use of wetting agent such as 1,2,6-hexanetriol and trimethylolpropane (col.5, lines 43-47 and 51-52). Given that Kubota et al. disclose wetting agent identical to that presently claimed, it is clear that such wetting agents would intrinsically be solid at room temperature. Evidence to support

this position is found on page 2387 of the *Aldrich Catalog* that discloses that trimethylolpropane has melting temperature of 56 to 58 °C and thus, it would have been natural for one of ordinary skill in the art to infer that trimethylolpropane is in fact solid at room temperature.

In light of the motivation for using wetting agent such as 1,2,6-hexanetriol or trimethylolpropane disclosed by Kubota et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such wetting agent in the ink jet ink of Ganapathiappan in order to produce ink with increased wettability that will not clog the printer nozzles, and thereby arrive at the claimed invention.

With respect to difference (b), Ohta et al., which is drawn to ink jet ink, disclose the use of pH adjustor such as sodium hydroxide, lithium hydroxide, or potassium hydroxide in order to improve the dispersion stability of the pigment and resin emulsion (col.9, lines 26-31).

In light of the motivation for using pH adjustor disclosed by Ohta et al. as describe above, it therefore would have been obvious to one of ordinary skill in the art to use such pH adjustor in the ink jet ink of Ganapathiappan in order to produce ink with good stability, and thereby arrive at the claimed invention.

With respect to difference (c), Ohta et al., which is drawn to ink jet inks, disclose the use of glycerol in order to prevent clogging of the printer nozzles and improve the moisture retention and storage stability of the ink (col.8, lines 36-39 and 44).

In light of the motivation for using glycerol disclosed by Ohta et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use glycerol in the ink of Ganapathiappan in order to produce ink with good storage stability and moisture retention that will not clog the printer nozzles, and thereby arrive at the claimed invention.

12. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganapathiappan in view of Kubota et al., Ohta et al., and *Aldrich Catalog* as applied to claims 8-9, 15, 19-20, and 22-35 above, and further in view of either Belmont et al. (U.S. 5,630,868) or Suzuki et al. (U.S. 6,153,001).

The difference between Ganapathiappan in view of Kubota et al., Ohta et al., and *Aldrich Catalog* and the present claimed invention is the requirement in the claims of specific type of pigment.

Belmont et al. disclose the use of modified carbon black containing hydrophilic group on its surface wherein the hydrophilic group includes sulfonic acid, sulfinic acid, carboxylic acid and their salts. The motivation for using such pigment is that it has improved water dispersability as compared to untreated carbon black and produces ink with good stability, jettability, print quality, and optical density (col.4, lines 15-21, 29-35, and 44-46, col.5, lines 46-47, col.5, line 63-col.6, line 6, and col.6, lines 41-56).

Alternatively, Suzuki et al. disclose self-dispersing pigment containing hydrophilic group on its surface wherein the hydrophilic group includes sulfonic acid and carboxylic acid and their salts. The motivation for using such pigment is that no dispersant is required to stably disperse the pigment in the ink (col.7, lines 5-62).

In light of the motivation for using specific type of pigment disclosed by either Belmont et al. or Suzuki et al., it therefore would have been obvious to one of ordinary skill in the art to use such pigment in the ink of Ganapathiappan in order to produce ink which has good stability,

jettability, print quality, and optical density, or alternatively, to produce ink which does not require dispersant, and thereby arrive at the claimed invention.

13. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganapathiappan in view of Kubota et al., Ohta et al., and *Aldrich Catalog* as applied to claims 8-9, 15, 19-20, and 22-35 above, and further in view of Kubota et al. (U.S. 6,039,796).

The difference between Ganapathiappan in view of Kubota et al., Ohta et al., and *Aldrich Catalog* and the present claimed invention is the requirement in the claims of specific type of penetrant.

Kubota et al., which is drawn to ink jet ink, disclose the use of glycol ether penetrant (col.5, line 66-col.6, line 7) in order to increase penetration of ink into substrate.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use glycol ether penetrant in the ink jet ink of Ganapathiappan, and thereby arrive at the claimed invention.

14. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganapathiappan in view of Kubota et al., Ohta et al., and *Aldrich Catalog* as applied to claims 8-9, 15, 19-20, and 22-35 above, and further in view of McCain et al. (U.S. 5,981,623).

The difference between Ganapathiappan in view of Kubota et al., Ohta et al., and *Aldrich Catalog* and the present claimed invention is the requirement in the claims of specific type of penetrant.

McCain et al., which is drawn to ink jet ink, disclose the use of 1,2-hexanediol or 1,2-pentanediol in order to improve penetration of the ink into the substrate and eliminate intercolor bleed (col.4, lines 56-67).

In light of the motivation for using specific penetrant disclosed by McCain et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such penetrant in the ink jet ink of Ganapathiappan in order to produce ink which effectively penetrants into paper and does not exhibit intercolor bleed, and thereby arrive at the claimed invention.

15. **NOTE:** With respect to the 35 USC 103 rejections set forth above, it is noted that the present specification compares inks within the scope of the present claim, i.e. comprising solid wetting agent (example B1), with inks outside the scope of the present claims, i.e. comprising no wetting agent (examples B7 and B8). It is shown in Table B2 that the inventive inks are superior in terms of anti-clogging property and storage stability.

However, it is the examiner's position that the data is not successful in establishing unexpected or surprising results over the cited prior art given that, with respect to the storage stability, there does not appear to be much difference between the inventive ink and the comparative inks. That is, the inventive ink is rated A given that there was neither sediment or change in viscosity over two week storage period while the comparative ink is rated B given that there was a slight change in viscosity. However, it is noted that B rating also indicates that no sediment occurred and that the viscosity change is less than 1 cP. Thus, there appears to be little, if any, difference between inventive ink B1 and comparative inks B7 and B8 in terms of storage

stability. With respect to the anti-clogging property, it is the examiner's position that such results are not unexpected or surprising given that it is well known, as evidenced, for instance, by Takemoto (U.S. 6,075,069) in col.5, lines 43-52, that wetting agent are used to prevent nozzles of printer from clogging. Thus, one of ordinary skill in the art would expect ink with wetting agent to possess better anti-clogging ability than ink without such wetting agent.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sano et al. (U.S. 6,821,330) disclose ink jet ink comprising pigment and wetting agent such as 1,2,6,-hexanetriol and trimethylolpropane, however, there is no requirement of polymer emulsion as presently claimed.

Takemoto (U.S. 6,075,069) discloses ink jet ink comprising wetting agent such as 1,2,6,-hexanetriol and trimethylolpropane.

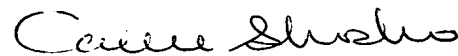
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
2/18/05